

REMARKS

The Examiner's continued attention to the present application is noted with appreciation.

In Sections 2 and 3 of the Office Action dated October 27, 2004, the Examiner objected to the figures stating that reference "30" of the specification is not shown in the figures and that reference "37" shown in Fig. 2 is not mentioned in the specification. Applicant has amended Fig. 2 to replace reference "37" with reference "30".

In Section 4, the Examiner objected to the figures stating that the stop recited in claims 4 and 14, the common fixture recited in claims 7 and 17, and the feature related to movement recited in claim 8 must be shown or cancelled in the claims. Applicant has cancelled claims 4 and 14. Applicant has amended claims 7 and 17 to clarify that the primary and tertiary mirrors are turned as a unit. With respect to the movement recited in claim 8, Applicant has deleted the recitation of the movement.

In Section 7, the Examiner rejected claims 1-3, 5-7, 9-13, and 15-20 under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,414,555 (to Chan et al.). Those rejections are traversed, particularly in light of the amendments to the claims.

The Examiner states that Chan et al. disclose an optical device with three mirrors described in columns 4-7 and Figs. 2-5 and 8 as comprising a primary mirror, a secondary mirror, and a tertiary mirror wherein the primary and tertiary mirrors share a common vertex and all mirrors share a common axis. The Examiner states that the primary-tertiary mirror pair is fabricated on a common substrate with a single point diamond turning for eliminating the need for aligning the two mirrors. The Examiner states that the second mirror, during alignment, can tilt and angle with respect to the alignment axis. The Examiner states that Fig. 2 of Chan et al. shows a hole between the primary and tertiary mirrors and that the use of an alignment tool is a method step that is given no weight in an apparatus claim.

The invention of Chan et al. is quite different from the present invention. Chan et al. describe the surfaces of the primary mirror and secondary mirror as being spherical, and the surface of the tertiary mirror as being ellipsoid. Chan et al. go on to explain that the common axis and shared vertex are the result of the surfaces being configured to share a common vertex and common axis drawn through the

center of the spheres and ellipse as shown in Fig.3 (See column 4, line 63 to column 5, line 6; Fig. 3).

Unlike the present invention, the vertex of Chan et al. intersects the face of the tertiary mirror.

Further, the hole between the primary mirror and tertiary mirror of Chan et al. is the space between them, whereas the hole of the present invention is a physical hole located at the junction and vertex of the primary and tertiary mirrors to receive an alignment tool. The "hole" of Chan et al. is not at the common vertex. Claims 1, 2, 5, 11, 12, 15, and 19 have been amended to clarify these features. Chan et al. teach away from the present invention.

In Section 9, the Examiner rejected claims 4 and 14 under 35 U.S.C. § 103(a) as being unpatentable over Chan et al. in view of U.S. Patent No. 4,598,981 (to Hallam). As noted above, those claims have been cancelled for reasons not related to the Examiner's § 103 rejection.

In Section 10, the Examiner rejected claim 8 under 35 U.S.C. § 103(a) as being unpatentable over Chan et al. in view of U.S. Patent No. 4,988,858 (to Pinson). That rejection is traversed. The Examiner states that moving either the primary or secondary system for the purpose of focusing is known to one skilled in the art as seen in Pinson. However, as noted above, claim 8 has been amended for reasons not related to the Examiner's § 103 rejection. Moreover, claim 8 is dependent on claim 1 which is believed to be patentable.

In view of the above amendments and remarks, it is respectfully submitted that all grounds of rejection and objection have been avoided and/or traversed. It is believed that the case is now in condition for allowance and same is respectfully requested.

Also being filed herewith is a Petition for Extension of Time to February 28, 2005. All appropriate fees are enclosed. Authorization is given to charge payment of any additional fees required, or credit any overpayment, to Deposit Acct. 13-4213.

If any issues remain, or if the Examiner believes that prosecution of this application might be expedited by discussion of the issues, the Examiner is cordially invited to telephone the undersigned attorney for Applicant at the telephone number listed below.

Respectfully submitted,



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Amendments to the Drawings:

The attached sheets of drawings include changes to Figs. 2 and 3. The sheet containing Figs. 2 and 3 replaces the original sheet that included Figs. 2 and 3. In Fig. 2, reference number "37" labeling the boresight tool/alignment post has been changed to reference number 30. In Fig. 3, the line from reference 34 has been moved to correctly point to the reflective datum.

Attachments: Replacement Sheets

 Annotated Marked-Up Drawings

2/3

Appl. No. 09/977,734
Amdt. Dated Feb. 25, 2004
Reply to Office Action of Jan. 15, 2004
Annotated Marked-Up Drawings

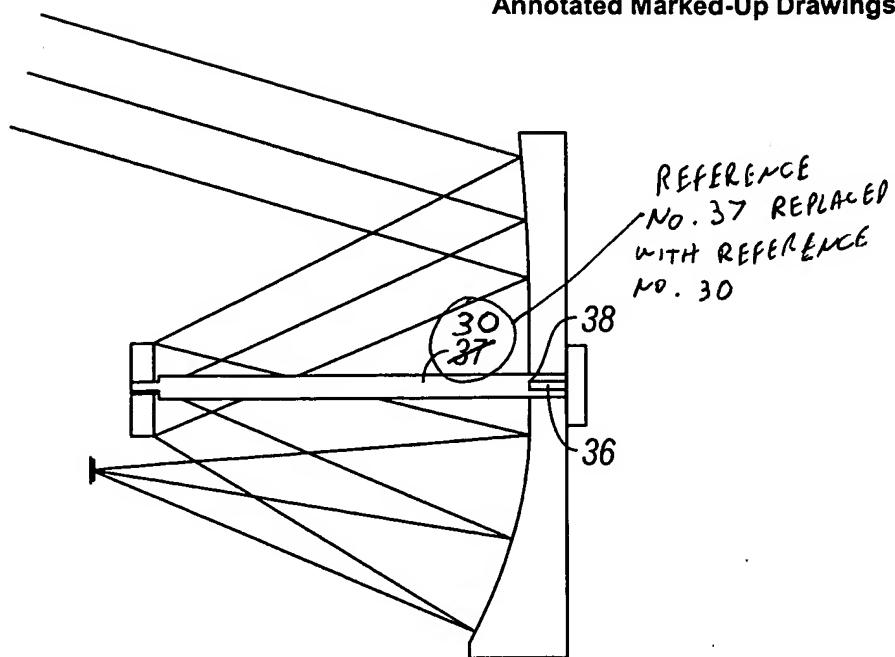


FIG. 2

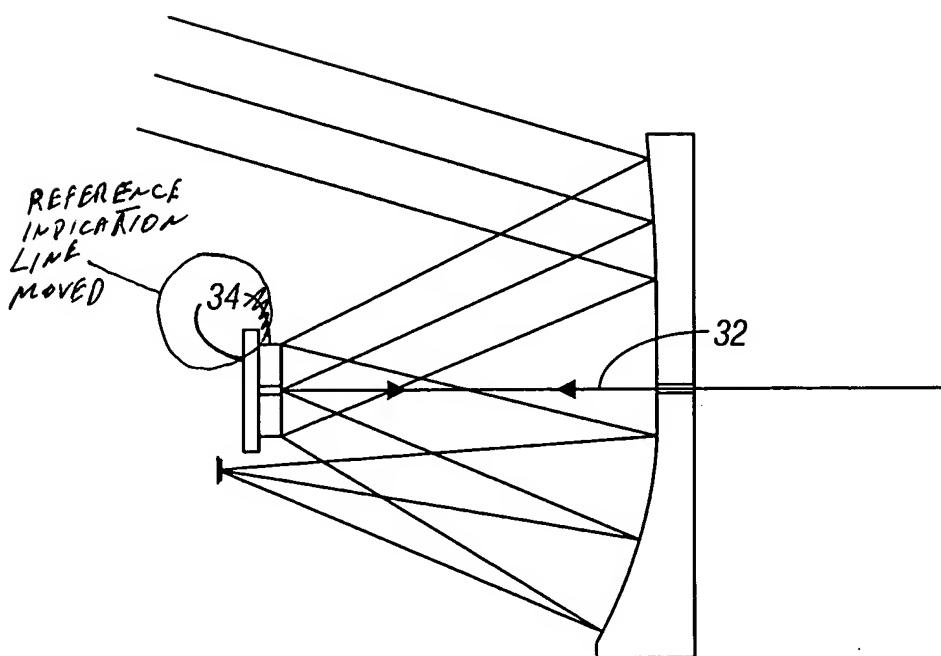


FIG. 3